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November 5, 2009

Andrew McGilvray, Executive Secretary
Foreign-Trade Zones Board
U.S. Department of Commerce
1401 Constitution Avenue, NW
Room 2111
Washington, DC 20230

Re: Application for Subzone Authorization at FTZ No. 203
REC Silicon – FTZ Board Docket Number 22-2009

Dear Mr. McGilvray:

As counsel to REC Silicon we are providing this letter responding to (1) certain statements made at the Hearing held on September 1, 2009 and (2) written comments filed with regard to the subzone application filed by the Port of Moses Lake seeking subzone designation for the REC Silicon manufacturing plants located in Moses Lake, Washington.

Avoiding the payment of antidumping duties on imports used to produce exported merchandise is not the central objective of the REC Silicon subzone application

At page 3 of its written comments, Globe Metallurgical (Globe) alleges that "the central purpose of these applications is to gain access to unfairly low-priced imports of Chinese and Russian silicon metal without paying antidumping duties (ADD) on those imports." REC Silicon has consistently maintained that this is not the case with regard to the REC Silicon application. Both in our application (at page 5) and in our testimony at the hearing (at page 35 of Transcript), we have stated that REC Silicon does not presently purchase silicon metal from China or Russia. The savings analysis provided in the application (at page10) does not include a projection with regard to potential savings for ADD elimination since REC Silicon has not imported from either China or Russia and has not definitively identified a source of supply from either country. It is therefore not possible to project any potential ADD savings – neither the identity of the manufacturer nor the time period are known, both elements which are needed to determine whether ADD are applicable and the amount of said duties. As stated at the hearing, REC

Silicon's position is that it does not wish to preclude its ability to eventually import silicon metal that may be subject to an ADD Order without depositing the ADD at the time of admission. However, to call this the central objective of the application is extremely far reaching. Presently, REC Silicon sources the majority of its silicon metal from Brazil, Norway, South Africa and Canada. The establishment of the REC Silicon plants in Moses Lake will, as indicated in our application, eliminate the payment of customs duties on the silicon metal imported from these countries, which will, in turn, make the polysilicon and silane gas produced in Moses Lake more cost competitive in the global marketplace.

Use of a Foreign Trade Zone does not result in the circumvention of an Antidumping Duty Order

The gist of the opposition to the REC Silicon application is that it will allegedly result in the circumvention of ADD Orders on silicon metal from China and Russia (Mr. Sims of Globe at Hearing at page 57 of Transcript). The ADD Orders for silicon metal from China and Russia direct the imposition of ADD for all shipments of the subject merchandise **entered, or withdrawn from warehouse, for consumption on or after** a specific date. These ADD Orders, like all other ADD Orders, apply only to silicon metal entered for consumption into the United States and do not encompass silicon metal that is never entered for consumption into the United States – such as silicon metal admitted into a Foreign Trade Zone or entered into a customs bonded warehouse or under a temporary importation bond. Both US Customs and Border Protection and the United States Court of International Trade (USCIT) have held that ADD are not to be collected on merchandise imported into the United States under a Temporary Importation Bond. In C.S.D. 93-21 dated March 30, 1992, Customs Headquarters stated;

> Customs has consistently held that a TIB entry is not an entry for consumption. See 19 CFR 141.0a(f), defining "entered for consumption" and 19 CFR 10.31(f), quoted above, which clearly distinguishes between a TIB entry and "an ordinary consumption entry"; note also that a TIB entry is not liquidated (19 CFR 10.31(h) cited above, see also 19 CFR 159.2). Court decisions interpreting the term entry for consumption support this position (see A. W. Fenton Co., Inc. v. United States, 55 CCPA 54, C.A.D. 933 (1968); Excel Shipping Corp. v. United States, 44 Cust. Ct. 55, C.D. 2153 (1960); Korlis, Ltd. v. United States, 56 Cust. Ct. 365, 367, C.D. 2660 (1966), in which merchandise entered for consumption is described as that "which goes immediately into the commerce of the United States, as distinguished from merchandise entered for storage in a warehouse, for exhibition, for transportation, etc.").

This interpretation has been supported by the USCIT in Titanium Metals Corporation v. United States, 19 CIT 1143 (August 30, 1995) in which the USCIT citing to 19 U.S.C. 1673b(d)(1) stated that "the statutory language is clear that the assessment of AD/CV duties is restricted to merchandise entered or withdrawn from warehouse for consumption." The Court held that "Commerce and Customs' treatment of TIB entries as not entered for consumption, for purposes of AD/CV duty laws, is reasonable and not contrary to the legislative intent of the statute." With regard to circumvention of an ADD Order the USCIT held:

> Potential for circumvention is relevant, but only to the extent it relates to statutory interpretation. While TIMET claims it is clear that Congress' intent is to close any perceived "loopholes" in the antidumping laws and Congress would have defined "entered for consumption" to encompass TIB entries had it considered the issue, **the court does not discern such a clear intent**. Despite past legislative action by Congress to prevent circumvention of AD/CV duty laws in other circumstances, the term "entered for consumption" under the circumstances, AD/CV laws is, at least ambiguous and the court will not infer legislative intent in derogation of the reasonable interpretation of Commerce.

The rationale of the USCIT regarding the intent of Congress in interpreting a statute as written is a recognized canon of judicial jurisprudence. Since the statute restricts the collection of ADD to merchandise entered or withdrawn from warehouse for consumption, merchandise imported into the United States under a TIB, a customs bonded warehouse entry or foreign trade zone admission is not subject at that time to the imposition of the ADD. It is only when that merchandise is entered for consumption that the ADD is to be collected. It is thus clear that the importation of merchandise under a TIB, a bonded warehouse entry or a foreign trade zone admission does not result in a circumvention of an ADD Order.

In fact, the Foreign Trade Zones Board Regulations provide a safeguard against circumventing an ADD Order by requiring the admission of all merchandise subject to an ADD Order as Privileged Foreign Status Merchandise (15 C.F.R. 400.33(b)). As a result, any merchandise covered by an ADD Order will, upon entry into the customs territory of the United States, be subject to the deposit of the ADD at the rate applicable at the time of entry. This Regulation was promulgated in 1991 after extensive review by the Foreign Trade Zones Board and consideration of comments from all interested parties. In its response to the comments, the Foreign Trade Zones Board noted the "special nature of AD/CVD duties as a remedy for unfair trade practices" and adopted an "absolute requirement" for the handling of all merchandise subject to ADD that would be entered into the United States for consumption. This rational approach provides the protection to domestic producers of the merchandise subject to the ADD Order by retaining the ADD on merchandise destined for the domestic market (entered for consumption), while

balancing the interests of other domestic-based manufacturers who utilize the merchandise subject to the ADD Order that seek to compete in export markets where they would be otherwise disadvantaged compared to their foreign competition.

REC Silicon sells, and will be selling, the polysilicon and the silane gas produced in Moses Lake to both related and unrelated companies

At pages 16 and 17 of its comments, Globe discusses what it describes as REC Silicon's predominantly captive customer base and cites to the 2008 Annual Report which indicated that approximately 70% of the polysilicon volumes were shipped to REC companies. Although REC Silicon is related to a number of its customers, it has been enlarging its customer base in the past three years and hopes to continue to become more diverse as it increases its production of both polysilicon and silane gas. As reported on October 27, 2009 in the REC ASA Third Quarter 2009 Results, REC Silicon shipped around 60% of its polysilicon volume in the third quarter to REC companies.

It is to be further noted that even though there is a relationship between REC Silicon and a number of its customers, said customers are separate legal entities and operate as distinct profit centers. As such they are not limited to purchasing their polysilicon and silane gas from REC Silicon and have the ability, and exercise said ability, to purchase polysilicon and silane gas from other producers.

Based upon REC Silicon's current trend of attracting new business from unrelated entities and the fact that related entities to which REC Silicon sells its polysilicon and silane gas are free to purchase said products on the open market, it is critical for REC Silicon's continued success to be cost competitive with all producers of polysilicon and silane gas. Foreign Trade Zone designation provides REC Silicon the ability to be more cost competitive so as to attract new customers and retain existing ones.

The availability and price of silicon metal has fluctuated in the past and is likely to fluctuate again in the future.

Globe has made a point both at the hearing and in its comments that there is no shortage of silicon metal at the present time and the price is substantially less than stated in the REC Silicon subzone application (Globe's comments at pages 12-14). As was stated at the hearing by both Mr. Searcy of Dow Corning Corporation and Mr. Bowes of REC Silicon (at page 144 of Transcript) the availability of silicon metal is very cyclical –there are times when the supply is available and other times when the market is so tight that manufacturers needing silicon metal are unable to locate the product.

At the hearing, Mr. Perkins of Globe (page 64 of the Transcript) stated that:

> This February at the same time REC Silicon was preparing this application claiming there is a supply shortage, the company was

> asking Globe to reduce or delay deliveries under the long term contract. One month later, only two weeks before submitting this subzone application, REC Silicon declared force majeure under the contract and stated it was unable to accept any more silicon metal deliveries until further notice.

This statement may leave the impression that REC Silicon's claim in the application that there have been supply shortages of silicon metal was misleading. Such is not the case. At the point in time that REC Silicon declared force majeur, the company was experiencing some unforeseen situations that prevented the new plant in Moses Lake from starting up on time. As a result, REC Silicon was not in a position to accept any more deliveries. As it turned out, REC Silicon did accept all Globe deliveries.

Attached as Exhibit 1, is the CRU Analysis for the price of silicon metal from 1999 projected through 2013. It is to be noted that in 2008, the price of silicon metal peaked – this is the period of time during which the REC Silicon application was being prepared and 2008 was cited on page 2 of the application as being when the cost was at its high. The reason for this high cost was the increased demand and lack of supply. As the CRU Analysis indicates, the projection for the future prices of silicon metal is that they will start to increase at a fairly steady trend as the demand increases and the supply shrinks. In further support of the tight market that existed for silicon metal in 2007 and 2008 we are attaching as Exhibit 2, an article published at page 4 in the November 19, 2007 Ryan's Notes dealing with the tightness of silicon metal supplies. In addition, we are attaching as Exhibit 3, an article that appeared on page 4 in the March 3, 2008 Ryan's Notes reinforcing that there was a lack of supply of silicon metal, due in part at that point in time to the declaration of force majeure by Ferroatlantica SA. History has demonstrated that the fact that there may be no shortage of silicon metal today does not assure that there will not be a shortage in the future. This uncertainty as to cost and supply of silicon metal greatly impacts the profitability of a company dependent upon silicon metal as its source ingredient. This is one of the reasons REC Silicon sought Foreign Trade Zone designation since it provides the company a mechanism to reduce costs associated with the importation and use of silicon metal.

The current financial well-being of a company seeking subzone designation is not a determinative factor with regard to the Board's decision to issue a grant of authority

In today's ever changing economy the financial health of a company is never guaranteed. A company can be generating a profit one year and lose money the next. The financial well-being of a company is comprised of numerous factors – its raw material costs, its labor costs, its general expenses, its customer base and their ability to purchase the company's products.

As pointed out in the subzone application at page 10, the savings that REC Silicon can realize through customs duty elimination on imported silicon metal is estimated to be

between 2 and 3 million dollars for 2010 (it is to be noted that this estimation does not include any projected savings for elimination of ADD since REC Silicon does not anticipate having an approved Chinese or Russian supplier within the next year). Contrary to the allegations of Globe this is not an insubstantial amount (at page 15 of its comments, Globe states that these anticipated savings represent a miniscule percentage of REC Silicon's annual revenues and earnings). If the standard used by the Foreign Trade Zones Board in evaluating a subzone application was the potential savings as compared to an applicant's revenues and earnings, none of the motor vehicle manufacturing or oil refinery applications would have been approved. These projected savings, which are savings in raw material costs, will be factored into the cost of the finished product to REC Silicon customers and will make REC Silicon more cost competitive in the global marketplace vis-à-vis its Asian competition, which as discussed below has increased its market share dramatically within the past two years.

With regard to the financial well-being of REC Silicon, Mr. Kestenbaum of Globe stated at the hearing that "the sales price of REC's products, for those who are not aware, ranges from $60 to $400 per kilo" (page 121 of the Transcript). The reference to $400 per kilo is inaccurate with respect to sales made by REC Silicon. Attached as Exhibit 4, is a graph produced by Photon Consulting indicating both the spot and contract prices for polysilicon from February 2008 through October 2009. Virtually all of REC Silicon sales were at a contract price and those extremely rare sales that were at the spot price never approached the $400 per kilo level.

The granting of subzone designation to the REC Silicon plants in Moses Lake is in total accord with the goal of the Foreign Trade Zones Act in that the designation would place a US company in a more competitive position with foreign producers that have recently increased their market share

The market share for US producers of polysilicon has been reduced over the past two years and based upon the growth of competition from Asian competitors there is a strong likelihood that it will continue to diminish. Attached as Exhibit 5, is Polysilicon Production data compiled by Winegarner, R.M. Healdsburg: Sage Concepts, which reflects this trend. Based on polysilicon production, from 2006 through 2008, the four U.S. producers of polysilicon saw their market share reduced from 57.63% to 40.96%. During the same time period the Asian producers of polysilicon enjoyed an increase in their market share from 21.11% to 32.03%. Based upon announced capacity, this trend is likely to continue with the Asian producers capturing an even greater market share by 2013. Of particular interest is the entry into the polysilicon market of Chinese producers. In 2006 and 2007, their presence was insignificant. By 2008 they had captured approximately 6.5% of market share. It is possible, based upon forecast announced capacity that by 2013, the Chinese producers can have captured as much as 39% of the polysilicon market share.

Additionally, we are attaching as Exhibit 6, an article that appeared on page 2 in the August 31, 2009 Ryan's Notes announcing that Tokuyama is raising money for

constructing a planned 690 million dollar, 6,000-mtpy polysilicon plant in Malaysia. This Malaysian polysilicon plant will boost Tokuyama's total capacity by 73%. Thus, there is a real threat to REC Silicon's long-term ability to retain market share. Foreign trade zone usage through which REC Silicon can eliminate its customs duties as well as potentially any ADD on polysilicon and silane gas to be sold in the global market will help place REC Silicon on a more level playing field with its foreign competition.

Even though the REC Silicon project in Becancour, Canada is on hold (Mr. Bowes at hearing at page 154 of Transcript), when the Becancour plant is operational it will be producing the same articles – polysilicon and silane gas – as are produced in the U.S. plants. Although under the same corporate umbrella as the U.S. plants, the Canadian plants will in effect be competing for the same global customers. The potential ability to eliminate the payment of ADD on silicon metal subject to an ADD Order would enable the U.S. plants to be on equal footing with the Canadian plants since there is no ADD imposed on Chinese or Russian silicon metal by Canada.

Globe's claim that Subzone Designation for REC Silicon would result in Lost Sales for Globe

It is to be noted that at the present time, REC Silicon is not, what could be termed a major customer of Globe. According to Globe's Annual Report for the period ending June 30, 2009, its net sales of silicon metal for the year ended June 30, 2008 was 145,675 MT whereas for the year ending June 30, 2009 it was 100,461 MT. For both years, REC Silicon purchases of silicon metal from Globe averaged around 3% of Globe's total sales of silicon metal. For Globe to claim that the potential loss of 3% of its total sales of silicon metal, with silicon metal constituting approximately 60% of its total sales for the year ending June 30, 2009, seems a stretch.

Conclusion

Foreign-Trade Zone designation is important to REC Silicon's ability to successfully compete in the global marketplace. All opposition voiced to the granting of the subzone application has been limited solely to the potential use by REC Silicon of silicon metal from China or Russia, two countries from which REC Silicon has not, and presently does not, source silicon metal. There has been no opposition voiced to REC Silicon using the foreign trade zone program to eliminate the customs duties on imported silicon metal. We have therefore devoted the focus of our comments on the ADD issue, which we believe the Foreign Trade Zones Board thoughtfully and adequately addressed in the promulgation of its Regulations in 1991.

In summation of our position, the elimination of customs duties and ADD on imported raw materials (such as silicon metal) contained in an article produced in the United States (such as silane gas and polysilicon) utilizing American workers that will be exported to third countries is the intended goal of the Foreign-Trade Zones Act. The use of the

Foreign Trade Zone places the United States manufacturer (such as REC Silicon) on a level playing field with its foreign competition. We therefore request that you approve the REC Silicon subzone application without any restrictions. We fully understand and appreciate that the Foreign Trade Zones Board, pursuant to its regulations at 15 C.F.R 400.31(d), has the ability to conduct a review of zone operations at any time after the issuance of the Grant of Authority to ensure that the ongoing zone activities are in compliance with the Foreign Trade Zones Act. We thank you for your consideration of the REC Silicon subzone application.

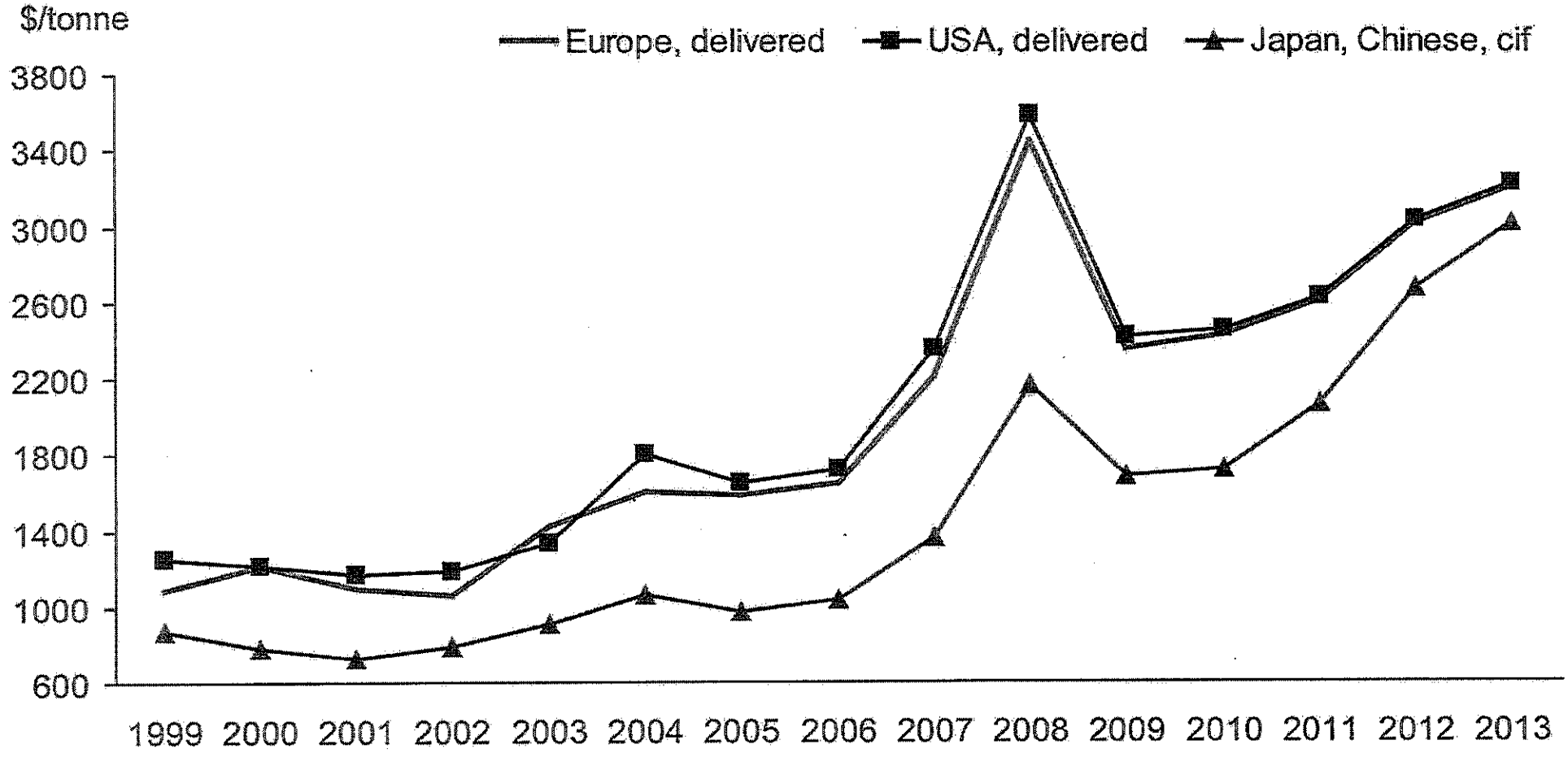
Very truly yours,

David R. Ostheimer

David R. Ostheimer
Counsel to REC Silicon

After sharp decline in 2009, prices will rebound due to rising demand and increasing supply costs

Outlook for average annual spot prices in the major Western markets through 2013



Data: CRU

EXHIBIT 1

100,000-mtpy high-carbon smelter in Turkey. Dedeman is in negotiations with a Japanese company to form a marketing company for its products—Mitsui is currently handling the Dedeman material.

India's Rohit Ferro Tech plans to raise its high-carbon ferrochrome production from 40,000 mtpy to 180,000 mtpy, most of which is now slated for the export market. The producer will operate two smelters—Jajpur (four 16.5-MVA units producing110,000 mtpy) and Bishnupur (five 9 MVA units producing 70,000 mtpy). RFTL is a custom smelter though it has applied for mining rights and has an ore agreement with Orissa Mining as well as buying imported feed.

DLA offered 1,500 tons of high-carbon ferrochrome (68.88% Cr) from its Curtis Bay, MD, depot and 2-million lb of 0.14% C, 66.62% Cr low carbon from its Pt. Pleasant, WV, facility at last week's BOA sale. Meanwhile, the agency still plans to start its SSA, or daily sales program, for ferrochrome in December (*Ryan's Notes*, Oct. 29, p3). Instead of being stored at a DLA depot, the material is in a Kinder Morgan warehouse in Pittsburgh. DLA is in the process of determining a premium for the ferrochrome; both low and high carbon will be offered under the SSA.

DLA also offered four lots of aluminothermic chrome metal at this month's BOA sale totaling 129,794 lb (644.897 tons). The lots—11.23 tons of German material, 30.77 tons from the UK, 11.4515 tons from the UK and 11.4455 tons from the UK. All the material is at Hammond, IN.

The US imported 279,262.1 mt of high-carbon ferrochrome in the first three quarters of 2007 vs. 296,00 mt in the same 2006 period. August imports were 30,957.3 mt, of which 29,669.1 mt came from South Africa. Major importers in the first three quarters of 2007 (2006 in parentheses) were South Africa, 186,777.6 mt (138,000); Kazakhstan, 62,265.2 mt (83,300 mt); Russia, 15,087.1 mt (34,900 mt); and Zimbabwe, 11,103.2 mt (39,100 mt). Even incorporating DLA's high-carbon sales, US stainless producers have shifted more of their ferrochrome requirements to charge chrome at the expense of high carbon.

US imports of low-carbon ferrochrome, not more than 0.5% C) were 23,437.9 mt in the first three quarters of 2007 vs. 22,600 mt in the same 2006 period. September shipments were 3,735.3 mt, of which 2,531.9 mt came from Russia. In the first three quarters of 2007, Russia supplied 11,957.2 mt compared with 10,500 mt in the same 2006 period. US imports of medium-carbon ferrochrome (more than 0.5% C but not more than 3% C) shot up to 5,214.2 mt in the first three quarters of 2007—4,100 mt from South Africa and 1,114.2 mt from Kazakhstan—compared to only 10 in the same 2006 period, all of which came from China.

International Ferro Metals (IFM) joined the list of South African ferrochrome producers lobbying for a price increase. The company pointed out that higher freight costs, in particular bulk shipping costs, on top of the depreciation of the US dollar adversely affected its margins. Plus, IFM said the South African ferrochrome industry was directly affected by the 6% depreciation of the US dollar against the South African rand since July 1. The company is paying its sales agents a 3% commission.

IFM also gave an update to its earlier production problems. The company said that its new ball mill gear box has been successfully installed and the pelletizing plant is now operating a full capacity. The replacement program for its electrode pressure rings is two thirds complete. Replacement of the pressure rings which hold the contact points against the electrodes within each of the company's two furnaces is progressing to schedule; IFM has 48 pressure rings of which 32 have been replaced to date. All replacements have been successful and all pressure rings are scheduled to have been replaced by the end of January 2008. The estimated production loss from the two problems remains at 30,000 mt through Jan. 31, and the company anticipates the smelter will resume production at the rate of 267,400 mtpy of ferrochrome within a few months. On that basis, IFM expects production for the year ending June 30, 2008 to total 237,000 mt.

The feasibility study to increase production capacity to 665,000 mtpy of ferrochrome is underway. A preliminary Mineral Resource Statement for Skychrome deposit shows resource tons above those previously estimated. Negotiations with banks to secure debt finance for the expansion are continuing.

Brazil's Ferbasa produced 42,351 mt of high-carbon ferrochrome in the third quarter of 2007, up from 26,195 mt in the same quarter of 2006. Low-carbon production, however, fell to 3,669 mt from 4,384 mt during the same period. Ferbasa, however, sold only 24,950 mt of high carbon domestically in the third quarter of 2007, while low-carbon sales were 3,416 mt; Ferbasa also exported 824 mt in the third quarter. The company's domestic price for high carbon was $1,297.51 per mt vs. $880 in the same 2006 period, while its export price was $1,111.64 per mt. Ferbasa also produced 11,660 mt of 75% ferrosilicon in the third quarter of 2007 and sold 7,673 mt domestically for $1,218.63 per mt and exported 7,788 mt for $1,218.63.

What happened to US imports of less than 99% silicon?

Much of the first-half 2008 US silicon business has been completed and most sellers were satisfied with the results. The suppliers were able to convince buyers that the market would remain tight for the foreseeable future and that there was no chance of prices going down.

While US year-to-date imports of 99-99.99% silicon metal were roughly the same as in the same 2006 period, there has been a major reduction of imported supplies of less than 99% Si material; most of this grade has supplied the US secondary aluminum industry. "Silicon supplies are tight, but the real crunch was caused by the loss of the lesser grade silicon," one analyst pointed out. "As a result, US secondary aluminum producers had to compete for the more expensive higher-purity grades."

The US imported 99,448.8 mt of 99-99.99% silicon metal in the first three quarters of 2007 vs. 94,200 mt in the same 2006 period. September shipments were 10,786.9 mt. The major suppliers in the first three quarters of 2007 (2006 in parentheses) were: Brazil, 34,087.1 mt (34,500 mt); South Africa, 30,377.1 mt (29,700 mt); Canada, 15,665.5 mt (13,200 mt); and Australia, 11,263.6 mt (9,820 mt).

On the other hand, the US imported 7,017.5 mt of less than 99% silicon in the first three quarters of 2007 vs. 16,800 mt in the same 2006 period. Major suppliers in the first three quarters of 2007 (2006 in parentheses) were Canada, 4,316.9 mt (6,640 mt) and Brazil, 1,618.2 mt (6,030 mt). In the same periods, deliveries from Norway fell to 61 mt vs. 1,060 mt in 2006, while the Ukraine supplied 1,870 mt in 2006 but zero this year.

The third quarter of 2007 wasn't very kind to Timminco's silicon business. The Canadian company reported a net loss of C$514,000 in the third quarter and a net loss of

C$522,000 in the first three quarters of 2007 vs. losses of C$203,000 and C$995,000, respectively, in the same 2006 periods. The strong Canadian dollar negatively impacted Timminco's bottom line. While silicon metal sales were up in the third quarter and the first three quarters of 2007, sales of ferrosilicon and byproducts were down. Timminco sold 30 mt of solar silicon in the third quarter of 2007 and 56 mt to date.

The silicon segment had sales of C$28.6-million for the third quarter of 2007, up C$500,000 vs. the same year-ago period, while nine-month sales were C$76.1-million, up from C$72-million in the same 2006 period.

The last set of documents was filed in the MPM's request for a free trade zone for its Waterford, NY, facility. Only lawyers for Globe Metallurgical filed rebuttals, basically reiterating the company's position that MPM's gain would be Globe's loss. Globe fears that if MPM wins its case, other US companies with foreign marketing operations could use the subzones to turn their US facilities into export platforms using imported silicon while supplying the US market from their foreign plants.

"Assuming MPM consumes an annual volume of silicon equivalent to the volume consumed by its predecessor, GE Silicones, and replaced just 20% of its annual requirements with Chinese silicon metal, this change in sources would create annual lost sales of over $17-million (based on the reported contract price for chemical-grade silicon in the US for 2007)," Globe wrote the Commission. "Even if half of these sales were lost by suppliers of fairly traded traded imports, Globe would lose about $8.5-million in sales annually if the requested subzone status were granted. Thus, the likely losses to Globe if MPM's application were granted, range from $8.5-million to $17-million, under these conservative assumptions."

Trina Solar has signed a six-year polysilicon supply agreement with Sichuan Yongxiang Polysilicon, which is in the process of building a 10,000-mtpy polysilicon plant. Sichuan Yongxiang's first phase of 1,000 mt is expected to begin operations in 2008. Under the agreement, Sichuan Yongxiang will supply Trina Solar with enough virgin polysilicon to produce approximately 1,300MW of modules; deliveries under this agreement will begin in mid 2008 and continue through 2013.

With the contract and with existing supply agreements, Trina has secured approximately 70% of its polysilicon requirements for its 2008 planned production. In October, Sichuan Yongxiang signed a contract to supply ReneSolar 3,700 mt of polysilicon over three-year period beginning in the second half of 2008. The polysilicon is sufficient to produce about 450MW of wafer production.

LDK Solar said an independent audit committee is now expected to report the findings of the investigation in early December into allegations made by a former LDK employee that the company incorrectly reported its inventories of polysilicon. The company will not issue its third-quarter financials until the committee's report is published. LDK said its business remains strong and it has continued its wafer production, shipments to customers and capacity expansion as planned. The ongoing investigation has not had an impact on procurement of polysilicon, production, capacity plans or overall business.

Construction of LDK's TCS and polysilicon plant are on schedule and the company continues to believe it will be ready for production capacity of 7,000 mtpy by the end of 2008. In line with plans for construction of the plant, LDK expects to receive the two readily available Siemens technology-based reactors and related plant equipment from Sunways in the fourth quarter 2007 and will begin installation soon thereafter. LDK expects to start trial production of the equipment by the end of second quarter of 2008. Delivery of GT Solar reactors and other long-lead equipment and reactors is expected to commence in the second quarter of 2008 through 2009. Additionally, the company has hired skilled employees with polysilicon and TCS production experience.

LDK also received an inquiry from the New York Stock Exchange (NYSE) on the inventory allegations, and it will cooperate fully with the NYSE.

For the fourth quarter of fiscal 2007, LDK estimates revenue to be in the range of $165- to $170-million and fully diluted earnings per ADS of 37¢ to 41¢. The wafer shipment for the fourth quarter of 2007 is expected to be between 82 to 88 MW.

Germany's Q-Cells, the world's second largest producer of solar cells, reported sales rose 50% in the first three quarters of 2007 to €577.1-million from the same year-ago period; third quarter sales were up 61% to €226.7-million. The company's EBIT was up 44% to €131.1-million; third-quarter EBIT was up 43% to €50.2-million for the same 2006 period. Q-Cells revised its 2008 sales expectations to €1.2-billion, up €200-million, before taking into account the contribution of Q-Cells' 17.9% stake in REC. As for 2009, Q-Cells raised its sales expectations to €1.7-billion, up from €1.4-billion.

REC will supply EverQ, a joint venture of Q-Cells, Evergreen Solar and REC, up to 2,100 mtpy of polysilicon under existing and new contracts.

FERROALLOY *Notes*

A slide interrupted some operations at the open-pit Endako, B.C., moly mine last week. The mill at Endako will continue to operate, using ore currently being mined from the mine's Denak West Pit, which was not affected by the slide, and from the mine's stockpile of ore. The production rate, grade and recoveries at the mill may be affected, Thompson Creek said. Thompson Creek owns 75% of Endako and Sojitz owns 25%. Management is currently evaluating the situation and will release details about the slide's impact at a later date. The week before Thompson Creek revised downward its production forecast for 2007 and 2008 because of mining conditions at the Thompson Creek, ID, mine (*Ryan's Notes*, Nov. 13, p2). Endako produced 2.53-million lb in the third quarter of 2007 and 7.46-million lb during the first nine months of the year. In the past when slides have occurred, mine personnel have done remedial work that has allowed the mine to function without long-term interruption, Thompson Creek said. The slide occurred on Nov. 12 partially burying a shovel that was mining ore at the site. An operator sustained only a minor injury and operations at the Endako Pit were shut in order for the situation to be assessed.

On the heels of the Endako slide came news of an earthquake in Chile measuring 7.7 on the Richter Scale. The center of the quake reportedly was in the town of Calama which is the closest town to the Chuquicamata copper/moly mine. A spokesperson for Codelco said that there was no electricity at the mine for about 12 hours. Operations were quickly back to normal, Codelco said, and the only interruption was connected

imports from Bhutan and Nepal; and regulations to discourage exports of manganese and chrome ores. The group hopes that the ideas will be incorporated into the government's budget for the fiscal year beginning Apr. 1.

Baosteel, China's largest steel mill, entered into a long-term supply agreement for high-carbon ferrochrome with the Sichuan Jiannanchun Group, which has two ferrochrome plants with 100,000 mtpy of capacity. In 2008, Jiannanchun will supply 50,000 mtpy of high-carbon ferrochrome to Baosteel for three years. The purchase price for the initial 50,000 mt of high carbon is around RMB700-million ($98.6-million). Baosteel will consume approximately 450,000 mt of high-carbon ferrochrome this year. Baosteel relies on domestic supplies for 65% of ferrochrome requirements.

In 2007, China's imports of chrome ore hit an all time high of 6,090,317 mt vs. 4,320,970 mt in 2006. Imports were 1,963,864 mt (867,764 mt in 2006) from South Africa, 1,082,806 mt (740,800 mt) from Turkey, 984,515 mt (1,337,556 mt) from India, 337,265 mt (69,966 mt) from Oman, and 295,133 mt (196,536 mt) from Pakistan. In December 2007 imports were 461,105 mt vs. 289,781 mt.

Sylvania Resources has signed an amendment to treat Samancor Chrome's ROM fines from three new sites—Chrome's Broken Hill, Spitzkop, and Buffelsfontein East. An estimated 300,000 mtpy of ROM fines will be made available to Sylvania to extract PGMs and the chrome ore recovered from the fines will be returned to Samancor at a nominal charge. An additional 50,000-mtpy chrome treatment plant was bought from Samancor Chrome.

Norilsk, not Nikopol, is 50% owner of the Nkomati along with ARM (*Ryan's Notes*, Feb. 25, p2).

Ferroatlántica's SA *force majeure*

The US silicon market took another hit following Ferroatlántica's *force majeure*. Small quantities of spot material were sold as high as $1.70 per lb, with sellers predicting $2 in the near future. Some sellers were already offering fines at $1.85. In Europe, it was also a sellers' paradise with no offer too high though little, if any, buying was taking place.

Ferroatlántica declared a partial *force majeure* (17%) on silicon metal shipments from South Africa on Feb. 26 (*Ryan's Notes Online*, Feb. 27). All the South African material is sold in the US. The company has used all the safety stocks at its 55,00-mtpy smelter. With Eskom's 10% cutback on electricity to the smelter, Ferroatlántica says it can only produce 83% of normal on spec material; it is not known what the company is doing with its off spec material. Eskom began cutting back power in mid-January. The partial *force majeure* is for March and Ferroatlántica will make a decision about April at a future date.

Ferroatlántica is in the process of reopening its closed French smelters, and buyers are hoping that some of the company's European metal will start coming to the US, especially as it remains a premium market. In 2007, the US imported 38,033.3 mt (38,413 mt in 2006) of South African metal and 2,649.8 mt (0) from Spain and none from France; Ferroatlántica is the only silicon producer in the three countries.

"Since the US is a import restricted market, there aren't a lot of new sources to make up for any losses," one buyer complained. "I don't know how much Globe can increase production, but whatever the company does, it will be expensive."

Globe stepped up its attempt to halt the possible circumvention of US dumping duties by Canadian companies (*Ryan's Notes*, Aug. 13, 2007, p1). Globe initially asked that the ITA examine the dealings of 18 Canadian companies for mislabeled Chinese silicon, noting that during the period of investigation (June 1, 2006 through May 31, 2007) 97.6% of all silicon metal imports into Canada originated from China. In response, 12 of the 18 companies submitted responses, and one of these companies, Ferro-Alliages de Minéraux reported exports to the US of 257.194 mt and claimed that "it exported only material produced in Canada." However, Globe wrote the ITA and explained that Ferro-Alliages is not a Canadian silicon metal producer and is in the business of crushing, screening, blending, loading and unloading, packaging, and selling silicon metal and other products. Globe wants to be assured that the Ferro-Alliages' silicon was really produced in Canada.

Globe also noted that four other Canadian companies, Alloychem Impex Corp., Coldstone Metals, Gather Hope International, and Hunan Provincial Import & Export Group didn't respond to the ITA's questionnaire and therefore should be subject to adverse facts available findings.

Globe asked the ITA to withdraw requests for review for 10 Canadian companies: Bomet (Canada); Carbonsi Metallurgical, Chemical & Alloy, Crown All Corp., Global Minerals (Canada), Global Minerals Corp., IMMECC Resources, Lorbec Metals, SeaView Trading and Transtrading House. The companies said they didn't export and silicon to the US during the period of review.

With respect to MPM Silicones, GE Silicones, and Jiangxi Gangyuan Silicon Industry Corp., Globe also withdrew its request for review even though Jiangxi Gangyuan shipped 3,056 mt to MPM in Canada during the period of investigation. MPM/ GE is a US silicones manufacturer while Jiangxi Gangyuan was the only Chinese silicon producer involved in the review. Finally, Globe asked the ITA to extend its review for another 90 days—the results were expected to be released this week—to allow time to investigate the matter further.

A major Japanese secondary aluminum alloy producer last week bought Chinese 5-5-3 silicon for April-June shipment at an average price of about $2,230 per mt, c.i.f., up approximately $650 from previous quarter average price of $1,580. The company also bought small amount of 4-4-1 at an average price of slightly less than $2,300, also up from about $1,650 for the previous quarter. Another Japanese consumer also purchased 5-5-3 and its prices were $2,160-2,200 per mt c.i.f.

Timminco will raise its production of solar grade silicon to 14,400 mtpy from its initially planned output of 3,600 mtpy. The expansion, which is expected to cost $65-million, is slated to be completed by mid-2009. The expansion will include a new production facility equal in capacity to the manufacturing plant currently being commissioned at its Bécancour, Que., silicon smelter. Funding for the project will be from current liquidity, customer deposits under long-term supply agreements and expected cost flow from operations and will be expended throughout 2008 and the first half of 2009.

According to Timminco, buyers have already committed

for up to 6,000 mtpy starting in 2009, and the company has a pipeline of prospective customers who are interested in buying solar-grade silicon from the company.

LDK Solar signed an eight-year take-or-pay contract to supply multicrystalline solar wafers Hyundai Heavy Industries (HHI) beginning in late 2008. HHI will make an advanced payment representing a portion of the contract value to LDK Solar.

LDK had net sales of $192.8 million in the fourth quarter, up 21.4% from $158.7-million in the third quarter of 2007, and up 212% year-over-year from $61.9-million from the fourth quarter of 2006. Gross profit for the fourth quarter of 2007 was $58-million, up 18.6% from $48.9-million for the third quarter of 2007, and up 119% year-over-year. Gross profit margin for the fourth quarter of 2007 was 30.1% compared with 30.8% in the third quarter of 2007 and 42.9% in the fourth quarter of 2006. Net income for the fourth quarter of 2007 was $49.2-million compared to $41.6-million in the third quarter of 2007. The company ended the fourth quarter of fiscal 2007 with $83.5-million in cash and cash equivalents.

For the first quarter of 2008, LDK estimated its revenue to be in the range of $210-million to $220-million for wafer shipments of 98 MW to 104 MW. For 2008, LDK reiterates estimated revenue to be in the range of $960-million to $1-billion for wafer shipments of 510 MW to 530 MW. LDK also estimated polysilicon production to be in the range of 100 mt to 350 mt and gross margins of 26% to 31%.

Meanwhile, LDK's inventory accounting for its solar silicon inventories is still being questioned. Even though the company maintains that it hasn't over counted its stocks of solar silicon (*Ryan's Notes*, Oct. 15, 2007, p1), analysts at last week's conference call weren't too impressed. LDK uses mostly recycled, instead of virgin, polysilicon, saying it can produce wafers with as little as 25% virgin material.

The analysts said they were not able to replicate the same inventories that LDK reported, and questioned why LDK divided its inventory into two categories: Those that will be used within one year, and those that will be used beyond that period.

In response, the company's CFO said LDK's inventory numbers include polysilicon-contained slurry, wires, and other supplementary and packaging materials, not only processed polysilicon. By using two categories for its inventory, LDK could place a value for the material on its balance sheet even though it is not processed polysilicon.

Analysts, however, questioned the accounting, saying other companies don't use the same accounting and that it may be wrong to capitalize material that is not readily available for use and may be unusable.

Yingli Green Energy signed two polysilicon supply agreements with DC Chemical. Under the first agreement, DC Chemical will supply polysilicon with a value of approximately $27-million to Yingli Green Energy in 2008. Under the second agreement, DC Chemical will supply polysilicon with a total value of approximately $188-million from 2009 to 2013.

Hoku Scientific will raise an additional $25-million by issuing 2,893,520 shares and use the money to help finance the construction of its planned polysilicon smelter in Pocatello, ID. The company is now considering expanding the plant to 8,000 mt; the plant's capacity is scheduled to be 3,500 mtpy and is expected to have pilot production by the second half of this year and commercial shipments in the first half of 2009. With its 3,600-mtpy of capacity, more than half the cost of construction is covered by customer pre-payments. All of Hoku's customer contracts are long-term, fixed price and volume and all pre-payments are long-term sources of capital with secured by letters of credit or in escrow. If Hoku goes ahead with the expansion, the company's operating leverage will increase and gross margins, post-expansion, will be 45-55%.

The company believes that solar silicon demand was 49,011 mt in 2007, with production slightly less than 40,000 mt. By 2008, demand will be 54,737 mt, and virgin output will be approximately 48,000-49,000. By 2009, demand will be 60,496 mt and there will be a slight surplus solar silicon.

By 2010, production from existing producers will be around 60,000 mt but there will be a deficit of around 10,000 mt and that deficit will grow to over 20,000 mt by 2011.

Analysts agree that the polysilicon shortage may be ending. Most existing producers have announced capacity increases and the market has been flooded with new entrants. Free-market quotes seem to be stabilizing after a period of rapid speculative growth.

While most of the producers have take-or-pay contracts and require the buyers to pay over 10% of the total value of the deal to help finance construction of the new capacity, some producers are now looking for a higher "down payment," fearing increased volatility in prices and supply.

"Pricing is a mess," one seller confided. "There is the free-market price, but very little material is sold on that. Then there is a 'real price' for buyers who need additional material, and finally there is the contract price, which is at a sizeable discount to both, but has lots of preconditions. It is impossible to value of the polysilicon from reclaimed scrap, which is a significant factor in the market."

Finally, there was a sell off in almost all solar power company shares last week following a negative report on the industry from a Bank of America analyst.

Germany's Solarvalue hopes to begin solar-grade silicon production by the second half of 2008 from its new plant in Ruse, Slovenia; the facility once produced calcium carbide and has the infrastructure—arc and induction furnaces, smelting and casting plants—necessary for a quick startup. The company is building a laboratory-sized production facility in the US. The facility will test metallurgical-grade silicon from a variety of potential suppliers as well as evaluating the ability of its process to refine metallurgical-grade silicon into solar silicon at its plant in Slovenia. GE Energy, the old owner of MPM, has developed a method to create solar wafers from inferior silicon materials.

OMG benefits from strong demand

OM Group's record results for the fourth quarter and all of 2007 were the result of strong demand "in nearly every end market we serve, most notably battery, chemical, powder metallurgy and tire," said Joseph Scaminace, Chairman and CEO, and also the result of favorable pricing for products. Despite mixed indicators about the global economy, Scaminace said that the company is "on target" to reach its goal of having consolidated revenue of $2- to $4-billion by 2010.

Scaminace confirmed that OMG has a sales control program for its metal tools and diamond cutting powders, but he added that the company has "no issues with longstanding customers." OMG, he said, had seen an increase in buying

POLYSILICON PRICES (2008-2009)

Source: Photon Consulting's Confidential Silicon Price Index (Monthly Subscription). Photon's data collection began February 2008.

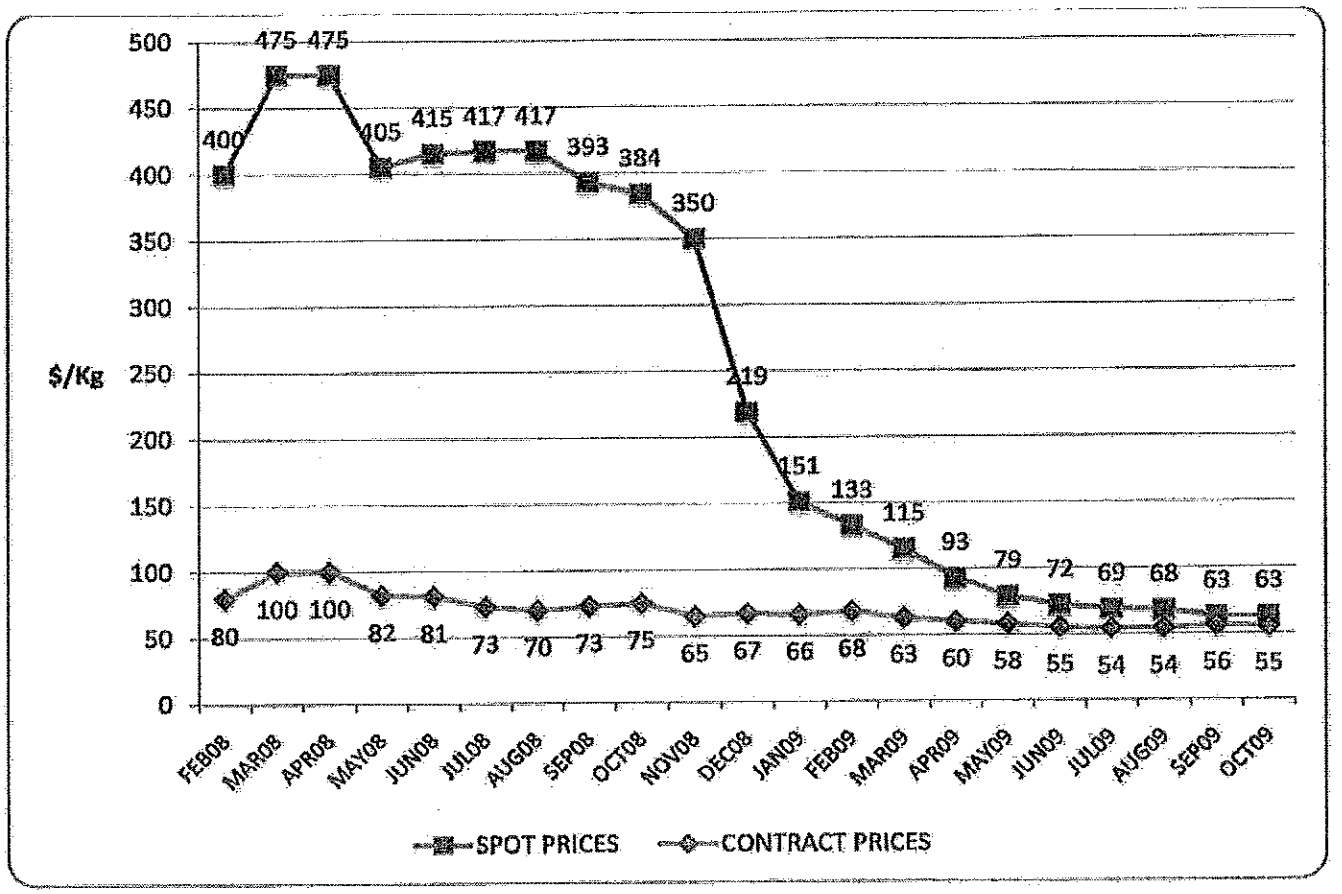


EXHIBIT 4

FTZB / POLYSILICON DATA

POLYSILICON PRODUCTION (2006)

2006	LOCATION	PRODUCTION IN METRIC TONS	MARKET SHARE
HEMLOCK	USA	11,621	30.9%
WACKER	GERMANY	6,879	18.3%
REC SILICON	USA	6,000	16.0%
TOKUYAMA	JAPAN	5,503	14.6%
MEMC	USA	2,600	6.9%
MITSUBISHI	JAPAN	1,600	4.3%
MITSUBISHI	USA	1,450	3.9%
MEMC	ITALY	1,100	2.9%
SUMITOMO TITANIUM	JAPAN	850	2.3%
TOTAL		**37,603**	

Source: Winegarner, R. M. (2007). Polysilicon 2007. Healdsburg: Sage Concepts.

POLYSILICON PRODUCTION (2007)

2007	LOCATION	PRODUCTION IN METRIC TONS	MARKET SHARE
HEMLOCK	USA	14,500	31.7%
WACKER	GERMANY	8,100	17.7%
REC SILICON	USA	6,400	14.0%
TOKUYAMA	JAPAN	5,600	12.2%
MEMC	USA	2,600	5.7%
MITSUBISHI	JAPAN	1,600	3.5%
DOW CORNING (UMG)	BRAZIL	1,500	3.3%
MITSUBISHI	USA	1,500	3.3%
OTHER NEWCOMERS	VARIOUS	1,500	3.3%
MEMC	ITALY	1,100	2.4%
OSAKA TITANIUM	JAPAN	900	2.0%
ELKEM (UMG)	NORWAY	280	0.6%
TIMMINCO (UMG)	CANADA	170	0.4%
TOTAL		**45,750**	

Source: Winegarner, R. M. (2008). Polysilicon 2008. Healdsburg: Sage Concepts.

POLYSILICON PRODUCTION (2008)

2008	LOCATION	PRODUCTION IN METRIC TONS	MARKET SHARE
HEMLOCK	USA	13,500	21.6%
WACKER	GERMANY	11,900	19.0%
REC SILICON	USA	6,200	9.9%
TOKUYAMA	JAPAN	5,419	8.7%
MEMC	USA	4,400	7.0%
DC CHEMICAL	KOREA	3,700	5.9%
MSETEK	JAPAN	2,700	4.3%
DOW CORNING (UMG)	BRAZIL	2,000	3.2%
MITSUBISHI	JAPAN	1,550	2.5%
MITSUBISHI	USA	1,500	2.4%
MEMC	ITALY	1,300	2.1%
OSAKA TITANIUM	JAPAN	1,250	2.0%
LUOYANG ZHONGUI	CHINA	1,100	1.8%
JACO SOLARSI (U MG)	CHINA	1,038	1.7%
TIMMINCO	CANADA	1,000	1.6%
XINGUANG	CHINA	1,000	1.6%
OTHER NEWCOMERS	VARIOUS	881	1.4%
ELKEM (U MG)	NORWAY	800	1.3%
JFE STEEL (UMG)	JAPAN	400	0.6%
EMEI	CHINA	300	0.5%
DAQO	CHINA	289	0.5%
GCL	CHINA	273	0.4%
TOTAL		62,500	

Source: Winegarner, R. M. (2009). Polysilicon 2009. Healdsburg:.Sage Concepts.

POLYSILICON SUPPLY FORECAST (2009-2013) -- Based on "Announced Capacity"

RANK	COMPANY NAME	COUNTRY	REGION	$US-M INVEST	2,009 MT	2,010 MT	2,011 MT	2,012 MT	2,013 MT
2	ASIA SILICON QINGHAI	CHINA	ASIA	$600	2,000	3,000	3,000	6,000	6,000
3	TAIWEI SICHUAN SILICON	CHINA	ASIA	$500	400	1,000	2,000	3,000	3,000
3	DALU TECH POLYSILICON	CHINA	ASIA	$300		1,000	1,500	2,500	2,500
2	EMEI SEMICONDUCTOR MAT'L	CHINA	ASIA	$77	1,500	1,000	1,500	1,500	1,500
2	FUSHUN KOSHUHA	CHINA	ASIA	$1,200			10,000	10,000	10,000
3	GANSU PROV ELEC POEWR	CHINA	ASIA	$14	100	4,000	4,000	4,000	4,000
4	JACO SOLARSI	CHINA	ASIA	$250	2,000	4,000	7,000	7,000	7,000
2	JIANGSU SHUNDA ELEC MAT'S	CHINA	ASIA	$576	800	1,500	1,500	6,000	6,000
3	JINSHI NEW ENERGY	CHINA	ASIA	$500	1,200	2,500	3,500	5,000	5,000
3	JINHUA SILICON	CHINA	ASIA	$100	1,000	1,000	1,000	1,000	1,000
3	KAILUN PV-HONGRIDGE	CHINA	ASIA	$700	1,000	2,000	2,000	7,000	7,000
2	LDK SOLAR	CHINA	ASIA	$1,728	1,000	5,000	10,000	15,000	15,000
2	LUOYANG ZHONGGUI HIGH TECH	CHINA	ASIA	$300	1,000	1,000	2,000	3,000	3,000
3	ZHEJIANG PRO POWER SILICON	CHINA	ASIA	$285		1,000	1,000	1,000	1,000
3	SUNSHINE SILICON (TENGJIA)	CHINA	ASIA	$450	1,500	1,500	3,000	4,500	4,500
2	QINGDAO DTK (JUPITETR)	CHINA	ASIA	$1,000	2,500	4,000	8,000	10,000	10,000
2	RENESOLA	CHINA	ASIA	$300	1,500	3,000	3,000	3,000	3,000
2	SAILING NEW ENERGY-DAQO	CHINA	ASIA	$375	1,500	3,500	6,300	9,300	9,300
2	DAQO	CHINA	ASIA	$1,140			6,000	6,000	6,000
3	SHAANXI TIANHONG SILICON	CHINA	ASIA	$533	1,250	1,250	2,500	3,750	3,750
3	SHANGHAI INDUSTRY INV	CHINA	ASIA	$260				3,000	3,000
3	SHENZHOU IM SILICON	CHINA	ASIA	$260		1,500	2,000	2,500	2,500
3	BUKIT SEMBAWANG	CHINA	ASIA	$500			2,500	5,000	5,000
3	SUNTECH POWER-WUXI ZHONGCAI	CHINA	ASIA	$450	280	1,800	4,500	4,500	4,500
2	TOKWEI YONGNANG SILICON	CHINA	ASIA	$938	1,000	3,000	6,000	9,000	9,000
2	CHINA SILICON - XINGUANG	CHINA	ASIA	$409	2,400	3,000	3,000	3,000	3,000
2	XINGUANG SILICON (JPID)	CHINA	ASIA	$1,672	3,000	3,000	3,000	3,000	3,000
3	XINJIANG TEBIAN	CHINA	ASIA	$150				1,500	1,500
3	XUNTIANYU TECHNOLOGY	CHINA	ASIA	$600		2,000	4,000	6,000	6,000
2	CSG HOLDING (YICHANG NANBO)	CHINA	ASIA	$964	1,500	3,000	3,000	4,500	4,500
2	YINGLI POLYSILICON (FINE SILICON)	CHINA	ASIA	$300		1,000	3,000	3,000	3,000
2	YUNNAN ADINCYMG(KMYY)	CHINA	ASIA	$300		1,500	3,000	3,000	3,000
2	GLC-ZHONGHENG	CHINA	ASIA	$750	8,000	10,500	18,000	21,000	21,000
2	GLC	CHINA	ASIA	$100				1,000	1,000
2	ZHONGSHENG	CHINA	ASIA	$300	3,000	3,000	3,000	3,000	3,000
2	JSS (CHISSO-NIPPON MINING)	JAPAN	ASIA	$218		400	3,000	4,500	4,500
4	JFE	JAPAN	ASIA	$40	400	400	400	400	400
2	M SETEK	JAPAN	ASIA	$1,500	3,000	4,500	6,000	15,000	15,000
1	MITSUBISHI	JAPAN	ASIA	$180	1,800	1,800	1,800	1,800	1,800
1	OSAKA TITANIUM TECH (ex-STC)	JAPAN	ASIA	$140	1,300	1,400	1,400	1,400	1,400
1	TOKUYAMA	MALAYSIA	ASIA	$800				3,000	6,000
1	TOKUYAMA	JAPAN	ASIA	$840	6,000	6,200	6,400	6,400	6,400
1	ORIENTAL CHEMICAL	S KOREA	ASIA	$3,000	6,500	16,500	20,000	26,500	26,500
2	WOONSJIN POLYSILICON	S KOREA	ASIA	$454		1,500	1,500	1,500	1,500
3	KMA (KCC & HYUNDAI)	S KOREA	ASIA	$600				3,000	3,000
2	MUTO SILICON	TAIWAN	ASIA	$1,000	1,000	3,000	5,000	5,000	5,000
3	SUN MATERIALS (SHAN YANG)	TAIWAN	ASIA	$500	PILOT	3,500	5,000	5,000	5,000
3	TOP GREEN ENERGY	TAIWAN	ASIA	$ 212 M		1,500	1,500	3,000	3,000
3	TAIWAN POLYSILICON	TAIWAN	ASIA	$303		1,000	5,000	8,000	8,000
3	FORMOSA CHEMICAL & FIBER	TAIWAN	ASIA	$1,000		1,500	3,000	4,500	4,500
3	SILPRO-SILICUM de PROVENCE	FRANCE	EUROPE	$300		0	0	0	0
2	JSSI	GERMANY	EUROPE	$85	850	850	850	850	850
2	PV CRYSTALOX	GERMANY	EUROPE	$112	900	900	900	1,800	1,800
1	WACKER	GERMANY	EUROPE	$1,000				10,000	10,000
1	WACKER	GERMANY	EUROPE	$2,200	15,300	17,000	25,000	25,000	25,000
3	PRIME SOLAR	GERMANY	EUROPE	$1,000		5,000	5,000	10,000	10,000
4	SCHEUTEN-SW SOLIDUM	GERMANY	EUROPE	$400		1,000	1,000	1,000	1,000
2	SOLON - ESTELUX	ITALY	EUROPE	$550			4,000	4,000	4,000
1	MEMC	ITALY	EUROPE	$110	1,100	1,400	1,600	1,700	1,700
2	SILFAB	ITALY	EUROPE	$500	0	0	2,500	2,500	2,500
2	THE SILICON MINE	NETHERLANDS	EUROPE	$2,000	4,000	4,000	9,000	14,000	14,000
4	ELKEM	NORWAY	EUROPE	$500	5,000	5,000	5,000	5,000	5,000
3	TASH-KUMYR SILICON (CRYSTAL)	RUSSIA	EUROPE	$200	185	185	185	2,000	2,000
2	NITOL	RUSSIA	EUROPE	$370	700	1,000	1,500	2,000	2,000
2	SILICIO ENERGIA	SPAIN	EUROPE	$400	2,400	2,400	2,400	4,800	4,800
3	SILKEN	SPAIN	EUROPE	$581	1,400	1,400	1,400	1,400	1,400
4	TIMMICO,BECANCOUR	CANADA	N AMERICA	$72	3,000	3,000	3,000	3,800	3,800
3	A/E POLYSILICON	USA	N AMERICA	$850		1,200	1,200	5,400	5,400
4	GLOBE SPECIALTY METALS-SOSIL	USA	N AMERICA	$100	500	500	500	500	500
4	BUCKEYE SILICON	USA	N AMERICA	$50			500	500	500
1	HEMLOCK SEMICONDUCTOR	USA	N AMERICA	$3,700	19,000	27,000	36,000	36,000	36,000
5	HOKU SCIENTIFIC	USA	N AMERICA	$350		2,500	2,500	3,500	3,500
1	MEMC	USA	N AMERICA	$800	4,250	5,800	6,500	8,000	8,000
1	MITSUBISHI	USA	N AMERICA	$185	1,850	1,850	1,850	1,850	1,850
2	PEAK SUN SILICON	USA	N AMERICA	$500	100	200	1,000	5,000	5,000
1	REC SILICON	USA	N AMERICA	$450	3,800	3,800	3,800	4,500	4,500
1	REC SILICON	USA	N AMERICA	$2,600	8,500	8,500	15,400	15,400	15,400
4	DOW CORNING	BRAZIL	OTHER	$600	3,000	3,000	3,000	10,000	10,000
2	NORSUN-SWICORP	SAUDI ARABIA	OTHER	$300		2,000	3,000	3,000	3,000
3	LANCO SOLAR	INDIA	OTHER	$100			1,000	1,000	1,000
	TOTALS			$49,269	137,845	220,215	333,565	458,850	459,850

Source: Winegarner, R. M. (2009). Polysilicon 2009. Healdsburg: Sage Concepts.

will be tradable on NASDAQ.

Credit Suisse and Goldman Sachs downgraded Q-Cells stock, saying that the solar cell manufacturer has been forced to close 50% of its German capacity and has suffered expansion delays at its Malaysian plant.

Tokuyama will raise up to ¥49.91-billion ($530-million), of which ¥20-billion ($212-million) will be used for various investment and the remaining money will be used for constructing the planned ¥65-billion ($690-million), 6,000-mtpy polysilicon plant in Malaysia.

The company will issue 65-million new shares and an additional maximum 9-million shares in an overallotment option in September. The Malaysian polysilicon plant will boost Tokuyama's total capacity by 73%.

In a blow to the scrap polysilicon market, the Chinese government banned imports for environmental reasons. According to analysts, scrap accounts for up to 30% of the feed for solar applications. While the ban hurts companies that process or use the polysilicon scrap, it is a boon for primary polysilicon manufacturers who no longer have to compete with much cheaper scrap.

According to Chinese environmental officials, the ban was necessary because the heavy chemicals used to process the scrap produce waste that could harm the environment.

While everyone agrees that the ban has gone into effect, it may not cover all grades of scrap. Rick Doobus, CEO of Hemlock Semiconductor, was quoted as saying that the restriction may only cover tops and tails from silicon ingot production, broken silicon wafers, and the "small fraction of polysilicon production that does not meet quality specifications." That material, according to Doobus, is used in about 10% of Chinese solar cell manufacturing, and the proportion is declining. No matter what, the ban will have no effect on Hemlock, the world's largest polysilicon producer. On the other hand, the ban has caused some confusion in the ports, and imports of polysilicon are being held up.

There was speculation that the Chinese government has decided to regulate the number of domestic polysilicon producers in order to match supply with demand. "The government doesn't want the same mess of too many small and inefficient silicon metal smelters to be duplicated in polysilicon," said an analyst.

A pause in Chinese chrome market

Ferrochrome prices continued to firm last week on small businesses. Most suppliers were still trying to get a fix on fourth-quarter consumption, but no clear picture was emerging. Western low-carbon producers were closely monitoring Chinese exports. One shipment of over 1,000 mt of 0.10%, low-chrome ferrochrome left China last month bound for the US. Insiders said the material was probably bought when Chinese prices were below $1.80 and is now only leaving the port. Chinese suppliers are trying to raise their f.o.b. prices to near $1.90, up about 8-10¢, but are meeting resistance.

Some of the shine may be wearing off the ferrochrome market. China, which has been the driving force in the market, seems to have lost its luster. Chinese ferrochrome smelters lowered their prices in the last couple of weeks in a bid to attract stainless mills to buy and to compete with imports. "At present, the domestic stainless steel market is taking a breath, so keeping ourselves cheaper than imports is the only card for us to play," said a major ferrochrome smelter.

Spot prices for high carbon last week were 7,600-7,800 yuan per mt (85-88¢ per lb) VAT unpaid, compared with 8,000-8,200 yuan (90-92¢) two weeks ago. And, with steel prices starting to weaken, major stainless mills are reportedly not going to increase their purchase prices for domestically produced material in September.

China remains the magnet for chrome ore imports. In July, imports reached 749,572.8 mt vs. 477,301.2 mt in June. The major suppliers in July 2009 were South Africa, 274,960.8 mt; Turkey, 159,231.4 mt; India, 102,126.9 mt; and Oman, 60,495.5 mt. In the first seven months of 2009, Chinese chrome ore imports were 3,098,057.1 mt vs. 4,206,705.4 mt in the same 2008 period.

China's imports of high-carbon ferrochrome were 200,106 mt in July vs. 236,962 mt in June and 97,704 mt in July 2008. Imports were 105,284 mt (42,175 mt in July 2008) from South Africa; 44,784 mt (35,231 mt) from Kazakhstan; 26,839 mt (20,271 mt) from India and 9,015 mt (0 mt) from Turkey. In the first seven months of 2009, imports were 1,250,715 mt vs. 756,630 mt in the same 2008 period.

China's exports of low carbon ferrochrome were 3,438 mt in July vs. 2,045 mt in June and 9,243 mt in July 2008. Exports in the first seven months of 2009 were 18,371 mt vs. 52,498 mt in the same year-ago period.

Assmang is planning to reopen its second charge chrome furnace at the beginning of September; the unit produces 50,000 mtpy. It is currently only operating one furnace producing 45,000 mtpy. The producer has no current plans to reopen its two remaining furnaces—100,000 mtpy and 50,000 mtpy—and will wait until market conditions improve.

DLA offered 1,000 tons of 66.18% Cr high-carbon ferrochrome from Pt. Pleasant, WV, at last week's BOA sale. The agency also offered 720,000 lb of 0.13% C, 65.78% Cr from its Ravenna, OH, depot.

Outokumpu will restart its 250,000-mtpy ferrochrome smelter at the beginning of October as earlier planned. The two-furnace smelter has been closed since April. The plant can run efficiently only at full capacity. While most of the ferrochrome is used internally, some will be sold. Competitors say Outokumpu's cost of production is around 94¢ per lb. The company is also restarting its Kemi chrome mine at the end of September; all of the mine's production goes to the smelter. Outokumpu's stainless mill is coming back onstream one month earlier than planned, i.e., September.

Elementis reported a pretax loss of £30.2-million for the first-half ended June 30, reflecting mainly an exceptional charge related to the closure of its Eaglescliffe, UK, chromium facility; the company reported a profit of £26.8-million in the first half of 2008. On an adjusted basis, earnings declined from the prior-year period on lower customer demand and sales volumes. During the first half, the company recorded a one-time charge of £32.4-million, of which £27.7-million related to the closure of Eaglescliffe. Revenues decreased to £172.2-million in the first half of 2009 from £186.9-million in the comparable period a year ago. The company's chromium segment reported revenue falling to £52.9-million from £79.8-million in the same 2008 period.

Nucor to test US SiMn market

The major test of the silicomanganese market will happen this week. Nucor Yamato, the largest single US user, tendered for its first-half 2010 commitments and is seeking 16,800 tons, or 12 barges. In addition, the mill is buying for two other Nucor mills; Jackson is looking for 1,400-1,500 tons for mid-February 2010 delivery, while Hickman wants